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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,337	02/07/2002	Naoki Kimura	Q67362	4604
23373	7590	09/20/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			PAK, SUNG H	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,337

Applicant(s)

KIMURA, NAOKI

Examiner

Sung H. Pak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4, 7-28 and 31-50 is/are rejected.
7) ☒ Claim(s) 5, 6, 29 and 30 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0704.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/03/2004 has been entered.

Information Disclosure Statement

Information disclosure statement filed 7/02/2004 has been considered by the examiner.

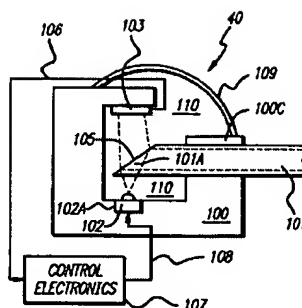
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7-10, 26-28, 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou (US 6,081,638) in view of DiDomenico, Jr. et al (US 4,165,496).

Zhou and DiDomenico, Jr. et al were cited in previous office actions.



Zhou discloses an optical device with all the limitations set forth in the claims, except it does not explicitly teach light monitoring means provided on the clad layer of light transmitting means.

Specifically, Zhou discloses: light emitting means for emitting signal light ('102'- figure above); optical transmitting means for transmitting said signal light surrounded by a clad layer ('101', column 4 lines 44-56); light monitoring means for receiving forward light directly (i.e. not reflected, directly emitted from the light emitting means- figure above); support means for supporting said light emitting means and said optical transmitting means ('100' figure above); wherein said light monitoring means is provided on the opposite side from the supporting means (figure above); wherein said forward light is a portion of leakage light that is not coupled to the optical transmitting means (column 6 lines 66-67); wherein said optical transmitting means is an optical waveguide; wherein said optical waveguide is an optical fiber (column 4 lines 44-56); positioning means for positioning the optical fiber so that signal light emitted from the light emitting means can be optically coupled to the optical fiber ('100, 100c' figure above- column 4 lines 22-42); positioning grooves that position optical fiber in the substrate (column 4 lines 38-42); wherein said light monitoring means is disposed so that it cannot contact the optical fiber

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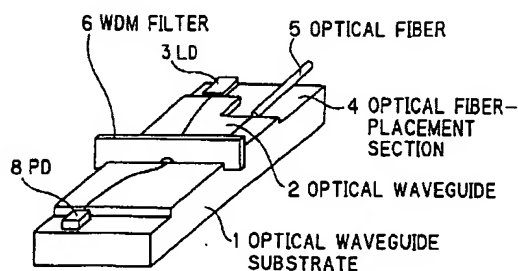
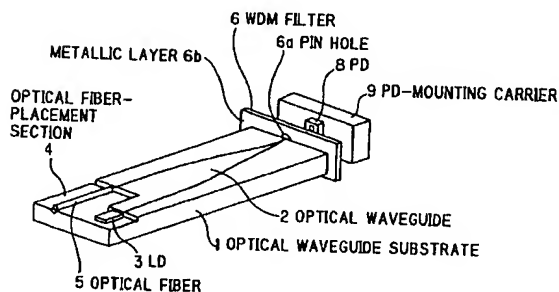
(figure above); wherein a current generated by the light monitoring means is used to control the signal light output from the light emitting means (figure above- column 6 lines 24-34).

However, DiDomenico explicitly teaches the light monitoring means provided on the clad layer of the optical waveguide (Fig. 5 of DiDomenico Jr. et al.). Disposing light monitoring means on the clad layer of the optical waveguide would be considered advantageous and desirable to one of ordinary skill in the art because it would allow greater portion of the light emitted by the light emitting device to be coupled into the monitoring means, and thus allows more accurate monitoring of the emitted light. In addition, disposing light monitoring means on the clad layer reduces the distance in which the emitted light has to travel before it is detected by the monitoring means. This would also improve the accuracy of light monitoring because the light would be less prone to deleterious effects, such as scattering.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Zhou device to have light monitoring means provided on the clad layer of the waveguide.

Claims 11-25, 38-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukutomi (US 2001/0033716A1) in view of Zhou (US 6,081,638).

Fukutomi was cited in previous office actions.



Fukutomi discloses an optical device with all the limitations set forth in the claims, except it does not teach light monitoring means for receiving forward light directly from light emitting means.

Specifically, Fukutomi discloses: light emitting means for emitting signal light ('3' left figure); first guiding means for guiding said signal light ('2' left figure); light monitoring means for receiving light emitted from the light emitting means (paragraph 0058); second guiding means for guiding signal light input to the optical semiconductor module (left figure, paragraph 0046); coupling means for coupling light guided through the first guiding means and light guided through the second guiding means (left figure); support means for supporting the light emitting means (left figure); light receiving means for receiving signal light guided by the second guiding means ('8' left figure); wherein the light receiving means is provided on the support means (left figure); wherein the first guiding means is a first waveguide and the second guiding means is a second waveguide (left figure); filtering means for allowing transmission of predetermined signal light ('6' right figure); third guiding means for guiding signal light allowed transmission by the filtering means (right figure); light receiving means for receiving signal light guided through the third guiding means (right figure); wherein the filtering means reflects the first signal light and allows transmission of second signal light (right figure, paragraph 0048); wherein the first, second and third guiding means are first, second, and third optical waveguides (right figure).

On the other hand, Zhou explicitly teaches light monitoring element that receives forward light directly (not reflected) from a light emitting element, wherein the light monitor is provided on the opposite side from the substrate, wherein a current is generated by the light monitor so as

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to control the signal light output from the light emitting element (Figure 4, see discussion above). Zhou teaches that such an arrangement is advantageous and desirable over the prior art because it allows for efficient coupling of light while providing accurate measure of emitted light intensity (column 2 lines 47-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Fukutomi device to have a light monitor that receives forward light as taught in Zhou.

Allowable Subject Matter

Claims 5-6, 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: as discussed in the claim rejection above, an optical device comprising a light emitting device, an optical waveguides, and a light monitoring element that receives the forward light directly (not reflected) from the light emitting element is known in the art.

However, none of the prior art fairly teaches or suggests such an optical device having a monitoring element that receives the forward light directly **AND** at the same also receives a portion of the signal light that is not coupled to the waveguide and reflected off of a reflecting means, as claimed in the instant application.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sung H. Pak
Examiner
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